



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/930,132	08/16/2001	Yasukazu Mukogawa	212883US2	1254

22850 7590 07/02/2002

OBLON SPIVAK MCCLELLAND MAIER & NEUSTADT PC  
FOURTH FLOOR  
1755 JEFFERSON DAVIS HIGHWAY  
ARLINGTON, VA 22202

EXAMINER

CINTINS, IVARS C

ART UNIT	PAPER NUMBER
----------	--------------

1724

DATE MAILED: 07/02/2002

2

Please find below and/or attached an Office communication concerning this application or proceeding.

MF=2

# Office Action Summary

Application No.  
09/930,132

Applicant(s)  
Mukogawa et al.

Examiner  
Ivars Cintins

Art Unit  
1724



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

Art Unit: 1724

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1-11 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. The claims contain numerous vague and indefinite expressions. For example, the terms: "provided in this order from the upstream side of a direction in which pure water flows" (claim 1, lines 2-3), "feedback system for measuring" (claim 1, line 7), "indicating a difference" (claim 1, line 10), "thereby adjusting" (claim 1, line 11), "in the order different from that in which said at least two ion exchangers are provided" (claim 5, line 6), "the uppermost stream side" (claim 6, line 3), "said at least two ion exchangers except said second ion exchanger" (claim 6, lines 8-9 and 12), "said at least two ion exchangers except said first ion exchanger" (claim 6, lines 14-15), "provided on its route" (claim 8, line 2), "meter for decomposing" (claim 9, line 2), "thereby measuring" (claim 9, line 3), "oxygen gas or ozone gas not including an organic

Art Unit: 1724

substance" (claim 10, line 3; claim 11, lines 3-4), etc. are vague, and indefinite as to the limitations intended.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 9-11 are rejected under 35 U.S.C. 102(a) as being anticipated by Yamasaki et al. (U.S. Patent No. 6,177,005). The reference discloses a system for producing ultrapure water, which system includes a TOC meter (see col. 10, line 9) in combination with an ultraviolet light source (see col. 22, line 19) and means for supplying cooled water with oxygen gas; and in view of the above noted indefiniteness of these claims, this is all that appears to be required by apparatus claims 9-11.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Art Unit: 1724

Claims 1, 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over laid-open Japanese Patent Application No. 10-123118 in view of Miyamaru et al. (U.S. Patent No. 5,259,972). Laid-open Japanese Patent Application No. 10-123118 discloses a system for producing ultrapure water, which system includes means for measuring dissolved oxygen concentration in a plurality of locations, and adjusting the amount of ultraviolet light applied to the water undergoing treatment in response to such measurements. Accordingly, this primary reference discloses the claimed invention with the exception of the recited decomposition unit. Miyamaru et al. discloses a similar system for producing ultrapure water, and teaches (see col. 2, lines 29-30) decomposing excess ozone with an activated carbon tower. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of the primary reference with the activated carbon tower of the secondary reference, in order to decompose excess ozone in said primary reference system.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over laid-open Japanese Patent Application No. 10-123118 in view of Miyamaru et al. as applied above, and further in view of Lowther (U.S. Patent No. 4,101,296). The modified primary reference discloses the claimed invention with the

Art Unit: 1724

exception of the recited alkali introducing means. Lowther discloses decomposing ozone in a system which introduces an "alkali component" (see col. 5, lines 54-55); and it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the ozone decomposition unit of the secondary reference for the activated carbon tower of the modified primary reference, since this secondary reference ozone decomposition unit is capable of decomposing excess ozone in ultrapure water in substantially the same manner as the activated carbon tower of the modified primary reference, to produce substantially the same results.

Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dempo (U.S. Patent No. 5,512,178) in view of Obata et al. (U.S. Patent No. 5,571,419). Dempo discloses a system for producing ultrapure water, which system includes a plurality of bypass routes (i.e. 27a, 27b and 28). Accordingly, this primary reference discloses the claimed invention with the exception of the use of a plurality of ion exchange resins in series, and the recited ultrafiltration film unit (claim 7). Obata et al. discloses a similar system for producing ultrapure water, which system includes a plurality of ion exchange resins connected in series (i.e. elements 26-28), and an ultrafiltration film unit (see col. 6, lines 46-47; and col. 11, lines 29-30).

Serial Number: 09/930,132

Page 6

Art Unit: 1724


It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Dempo with the plural ion exchange resin units and ultrafiltration film unit of Obata et al., in order to further purify the water undergoing treatment in this primary reference system.

Faylor et al. (U.S. Patent No. 3,870,033) and Saito et al. (U.S. Patent No. 5,073,268) disclose conventional systems for producing ultrapure water.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (703) 308-3840. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

The fax phone numbers for this art unit are: (703) 872-9311 for "Official" faxes after Final Rejection; (703) 872-9310 for all other "Official" faxes; and (703) 872-9492 for "Draft" and other "Unofficial" faxes.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

  
**Ivars C. Cintins**  
**Primary Examiner**  
**Art Unit 1724**

I. Cintins  
June 27, 2002